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ABSTRACT

The Concerns-Based Adoption Model (CBAM), a representation of the process by which an educational institution adopts an innovation, views adoption as a developmental process involving complex interaction between an adopting institution, a user system, and a resource system. The resource system is usually a formal organization whose expert knowledge of the innovation is available to the user system. This interaction, called collaborative linkage, is ideally characterized by open communication, which allows the resource system to assess the individual user's needs and concerns, and to select personalized intervention strategies based on this assessment. It is hypothesized that there are different, identifiable stages of concern about, and levels of use of an innovation. The user system's advancement to higher levels of use and concern is a developmental process. The intervention strategies of the resource system are aimed at answering the user's concerns, arousing higher concerns, and thereby advancing the level of use of the innovation. (Author)

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THE CONCERNS-BASED ADOPTION MODEL: A DEVELOPMENTAL CONCEPTUALIZATION OF THE ADOPTION PROCESS WITHIN EDUCATIONAL INSTITUTIONS

Gene E. Hall
Project Director

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The Research and Development Center for Teacher Education

The University of Texas at Austin

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A staff of more than 100 are engaged in projects ranging from basic research into effective teaching behavior, through development of special counselor training strategies, to the development, implementation and evaluation of a complete and radically different undergraduate teacher education program.

The Center's major program, the Personalized Teacher Education Program, has its roots in teacher personality research dating back to the mid-Fifties. This early research, which demonstrated how teacher's personalities and classroom behavior correlate with success in their teaching careers, has led to the development of a large group of products which help education facilities become aware of student teachers' individual needs. The program also has produced products for student teachers' use, to help them build on their strengths.

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THE CONCERNS-BASED ADOPTION MODEL: A DEVELOPMENTAL CONCEPTUALIZATION OF THE ADOPTION PROCESS WITHIN EDUCATIONAL INSTITUTIONS[1,2,3]

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The Concerns-Based Adoption Model (CBAM) was developed to represent the highly complex process entailed when educational institutions become involved in adopting innovations. If the model were as complex as the phenomena it is attempting to describe, it would be of no value to either the researchers or the practitioners. Consequently, the CBAM is an attempt to carefully compartmentalize a highly dynamic and intertwined process that involves the many individuals who form the institutions. The model does not directly provide methods to improve use of an innovation or delineate adoption strategies. Variables identified by the model, however, can be used as the criteria for assessing the effects of intervention strategies and does not suggest a theory for more effective selection of intervention strategies.

The model is the result of a three and one-half year study of innovation adoption in educational institutions. The three primary data sources have been 1) the literature of change, 2) extensive field-based experiences of the developers and other school-based and higher education-based adoption agents, and 3) documentation of the innovation adoption process in teacher education institutions.

Before briefly summarizing the data sources and presenting a general description of the CBAM a moment should be taken to point out the frame of reference for our work. We are studying innovation adoption in educational institutions. We are not studying the adoption of relatively simple innovations by individuals independent of a formal organization. We are not studying change in an "innovation free" context. What we are attempting to study and describe is the highly personal, dynamic, interactive process and events that occur when educational institutions adopt complex educational innovations. We do not see adoption as being an event at a point in time; rather, we see adoption

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[1]The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the author and do not necessarily reflect the position or policy of the National Institute of Education and no endorsement by the National Institute of Education should be inferred.

[2]For a more comprehensive discussion of the CBAM see Hall, Wallace, Dossett, "A Developmental Conceptualization of the Adoption Process Within Educational Institutions." Austin: The Research and Development Center for Teacher Education, The University of Texas, September 1973.

[3]Paper presented at the Annual Meeting of the American Educational Research Association, Chicago: April 18, 1974.

as a developmental process that individuals and institutions move through as they select, install and institutionalize use of an innovation. The long range goal of this work is development and refinement of a model that represents this complex process and identification of variables that are operationally definable and that lend themselves to quantification, are usable in field-based and experimental studies and, at the same time, have utilitarian applications for adoption agents involved in the trenches--attempting to facilitate innovation adoption.

The Literature

During the past decade a multitude of publications dissected the educational change process, describing the fabrication of new change models and examining old ones. Cursory examination of Rogers and Shoemaker's (1971) work, of Havelock's (1971) massive review and synthesis of the change literature, and of Maguire's (1970) review provides immediate perspective on the enormous amount of data and number of models available to stimulate the planning of educational change. Why, then, have schools, colleges, and universities remained generally untouched by many of the major thrusts of the reform movement?

Perhaps it is as Schmuck and Miles (1971) suggested--that more attention needs to be placed on organizational development within an educational institution. Given a supportive environment, more effective means of communication and the development of norms that support individual effort, innovations may take root, as some school-based organizational development studies indicate. Or, it may be that the adoption of innovations has not been sufficiently examined as a developmental process in which the concerns of the individual adopter and the relationship of these concerns to the use of the innovation play a major role. In a recent paper about program evaluation Charters and Jones (1973) ponder the issue of innovation adoption and suggest that there are levels of "reality" to school program change. If indeed there are different levels of use of innovations, then are the consequences of use different as well?

Empirical studies of educational change models (Kohl, 1972) begin to provide some insights into the complexity of the adoption process. Studies of this type need to continue. The organizational development studies suggested by Schmuck and Miles (1971) need support. Of equal importance, however, is the need for studies of the innovation adoption process from different frames of reference. Studies are needed that validate the stages and procedures in the adoption process. Perhaps of greater need are valid and practical tools for data gathering, analysis, and extensive documentation of intervention strategies during innovation adoption. Suffice to say--we need much more knowledge about variables that facilitate or impede the adoption of educational innovations, and we need many more practical tools that change agents can employ to facilitate adoption.

A second literature base for the CBAM is the work of Fuller (1969) on concerns of teachers. Fuller suggests preservice teachers as they progress through teacher education and move to inservice work move through a developmental

progression of "concerns." In their earliest experiences their concerns, personal needs or motivations, if you wish, are apt to be self-oriented. As they gain in exposure, training and experience their concerns shift to questions and needs related to the task of teaching. Ultimately, with additional experience, training, and success teachers develop more impact related concerns. In teacher education the consequence of this developmental conceptualization is the personalizing of education based on the developing concerns of the preservice teacher with more self and career exploration early in the program, methodology in the middle, and more educationally sophisticated interactive training and experience near the end of the teacher education program.

In the following pages the CBAM is described. Further discussion of the literature is not included here since it is not the purpose of this paper to present a literature review. However, the rich and diverse literature of "change" and educational research have afforded a major keystone for the development of the model.

Experiences of Practicing Adoption Agents

The developers of the model have had diverse and extensive firsthand experiences with innovation adoption ranging from schools to higher education to industry. In addition, during the model development period at various points nationally recognized and experienced change agents have served as consultants, reviewing and critiquing the model. The model has also been critiqued, and its components have been applied by practicing adoption agents in the field during the past year (Wallace, 1973). Their experiences, successes and feedback have been valuable in further refinement and delineation.

Documentation of Innovation Adoption

One program component of UTR&D has been the so-called Inter-Institutional Program (IIP) that is the linking agency for the Center with teacher education institutions around the nation. The staff of the Inter-Institutional Program are highly skilled adoption agents and have been working closely with approximately twenty-five teacher training institutions that have been adopting Center developed or related teacher education innovations.

As a regular part of the activities and work of the IIP staff procedures have been developed and established for documenting the events, processes, time line and interactions as they have occurred within the collaborating teacher training institutions and the collaborative activities with UTR&D in its role as a resource system. This documentation data has provided the real world balance and test that is needed in initial model development that insures against identifying constructs and dimensions that may be intellectually pleasing but have no real world counterpart or relevance. For further information on the analyses of these data see the following publications: Hall, 1973; Farrington, 1973; Manning, 1973.

DESCRIPTION OF CBAM

Collaborative Linkage

The CBAM begins with viewing the adopting institution as a User System composed of individuals, each of whom has his own sets of concerns, problems, skills, agendas and needs. In combination these individuals represent the institution and its functioning. When this user system becomes involved in adopting an innovation, a Resource System that is expert in the use of the innovation normally is available to help it develop its capability. Sometimes the resource system is an individual; sometimes it is located inside the user system; more likely, however, it is a formal organization outside the user system that forms a linkage with the user system.

Whatever form the resource system takes, for best results with all complex innovations the linkage should be a collaborative one based on mutual openness in communication and a sharing of resources, investments, outcomes and risks (see Figure 1). A one-way association is not likely to survive because the receivers will not sustain a commitment to a joint effort. The CBAM requires that investments be made by both user and resource systems, and that both be able to gain from the collaboration. In most instances a collaborative linkage is established to help the user system develop a high-quality use of the innovation as quickly and as easily as possible. This means that with time the individuals within the user system must become as knowledgeable about the innovation as are the members of the resource system. In addition, each individual in his role, whether it be as an administrator, faculty member or student, must develop the skills and finesse in using the innovation that will optimize the effects of its use.

One premise underlying the CBAM is that adoption agents (specialists in the use of the innovation and effective catalysts for facilitating change) work with people in the user system both individually and in groups. As a result, the CBAM at one level focuses on assessing the temporal state of the individuals within the user system. This assessment then allows the adoption agent to focus his interventions so that they respond to the perceived needs of the individual users and also relate to their levels of use of the innovation at that time. The constructs of the CBAM that make this possible are the two sets of scales: (1) Levels of Use of the innovation and (2) Stages of Concern about the innovation. In addition, a third and more provocative set of hypotheses has to do with the relationship of stages of concern to levels of use.

Levels of Use of the Innovation

We contend that there are observable differences in how various individuals approach and use an innovation. Specifically, it is hypothesized that there are identifiable, definable and measurable levels of use of an innovation that range from lack of knowing that the innovation even exists to an active, sophisticated and highly effective use of it. It is further hypothesized that growth in

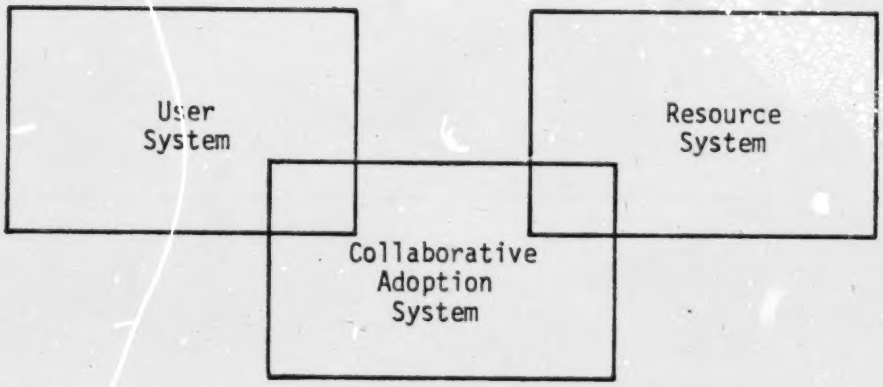

Figure 1. Basic Representation of the Systems of the Concerns-Based Adoption Model

quality of use of the innovation by most individuals is a developmental process. Normally, individuals do not just use an innovation for the first time, or even the second time, and use it as efficiently and as effectively as do those who have been involved with the innovation through four or five cycles of use. Advanced levels of use are not attained merely by use of the innovation through several cycles, however. Experience is essential but not sufficient to insure that a given individual will develop high quality use of an innovation.

An oversimplified but helpful illustration of the level-of-use dimension is the innovation-adoption process a college instructor goes through when he adopts a new textbook for a course he has taught many times. At first he will carry the new book around for reference much more than he did the old text. In preparing class presentations and examinations he will refer to it much more. His assignments are more likely to be literal chapter assignments, and he probably will follow a straight-forward progression through the text. His use of the innovation is apt to be "mechanical," uneven in flow and closely related to the flow in the text. As this instructor prepares to teach the course a second time using the new text, however, he is likely to select a different arrangement of assignments. This time, he may assign Chapter 4 first and, perhaps, delete Chapter 7 while substituting another reference he thinks will do a better job. In making these changes, he has progressed beyond a mechanical use of the innovation. He has gained the experience and know-how to be more adaptive in his approach, and he more smoothly integrates the use of the text into the rest of his instructional activities.

The operational definitions and scale points for the levels-of-use dimension of the CBAM are listed in Appendix A. Note the two subscales hypothesized for the levels-of-use dimension. One describes the knowledge level of the user. It hypothesizes that the cognitive level or amount of information and degree of understanding an individual user has about the innovation is a developmental progression. Assessment of this set of scale points might take the form of a pencil-paper achievement test. The other set of scale points for level of use of the innovation are the action scale points. In the CBAM we hypothesize that there are observable behavioral differences in how the innovation is actually used and that advancement to the higher levels of use of the innovation is a developmental process. Assessment of the action level of use requires direct observation of the users while they use the innovation.

Stages of Concern About the Innovation

A second dimension has to do with the individual user's needs, motivations, problems and requests as he is becoming expert in using the innovation. In a way that parallels Fuller's studies of concerns of teachers, individuals are hypothesized to have concerns that relate to their potential or actual use of an innovation. A set of scale points, Stages of Concern About the Innovation, has been defined for this dimension, and it is hypothesized that this dimension is also a developmental progression. That is, when individuals first approach using an innovation, their concerns will be different from those they

will have after they have used it awhile. Still higher stages of concern will be expressed with subsequent cycles of using the innovation unless one or more developmental processes become blocked or dormant.

As with Fuller's theory of concerns of teachers, the CBAM hypothesizes that early concerns are much more self-oriented than are later concerns. Table I lists Stages of Concern About the Innovation ranging from unaware to renewal with typical expressions of concern. The operationally defined scale points for Stage of Concern About the Innovation are presented in Appendix B.

Relationship Between SoC and LoU

It is hypothesized that concerns are related to use and that it is possible for change agents to infer a great deal about use of the innovation from listening to the user's concerns. This relationship is not always a simple one-to-one correspondence, however. Many of us, for example, have known golfers who "talked a good game" but whose actual play was rather far over par. The alternate imbalance in theory is also possible where the individual's concerns are very low level and he has serious doubts about his abilities when, in fact, he has the potential of being outstanding. There are also instances of individuals who "perform over their heads."

An illustration of these relationships using an educational innovation could be schools adopting open-concept classrooms. Many communities now have school buildings that are open concept and have reputations for having exciting, innovative programs. When one visits some of these schools, however, he finds book cases, chalk boards, easels and seating are arranged in blocks that serve as traditional self-contained classrooms (low use). In another school where all of the walls are gone, the pupils are roving aimlessly. No territories have been established; there is excessive confusion; and the climate feels tense. This is a school that is probably early in its use of open-concept classrooms and where the teachers have high stages of concern about sharing their leadership and responsibility for curriculum and about remaining non-authoritarian. But, in spite of these high concerns, their level of use of open-concept classrooms is low. They are confused and uncertain as a result of perhaps attempting a too ambitious beginning.

With the CBAM it is hypothesized that there is probably a middle range of relationships between concerns and use where successful advancement or growth is possible, but if an individual's stage of concern and level of use move too far out of correspondence then adoption of the innovation is in jeopardy. Figure 2 is a graphic representation of this set of hypotheses with the area within the envelope representing the hypothesized safe-growth area.

Extensity

The ultimate criterion in any innovation-adoption effort is the extent and quality of use by each user of the innovation within the user system. The

Table 1: Stages of Concern and Typical Expressions of Concern About the Innovation

Stage of Concern	Expressions of Concern
Unaware	I don't know anything about it (the innovation).
Awareness	I have heard about the innovation, but I don't know much about it.
Exploration	How much of my time would use of this innovation take?
Early Trial	I seem to be spending all my time in getting material ready for students.
Limited Impact	I can now see how this innovation relates to other things I am doing.
Maximum Benefit	I am concerned about relating the effects of this innovation with what other instructors are doing.
Renewal	I am trying a variation in my use of the innovation that looks like it is going to result in even greater effects.

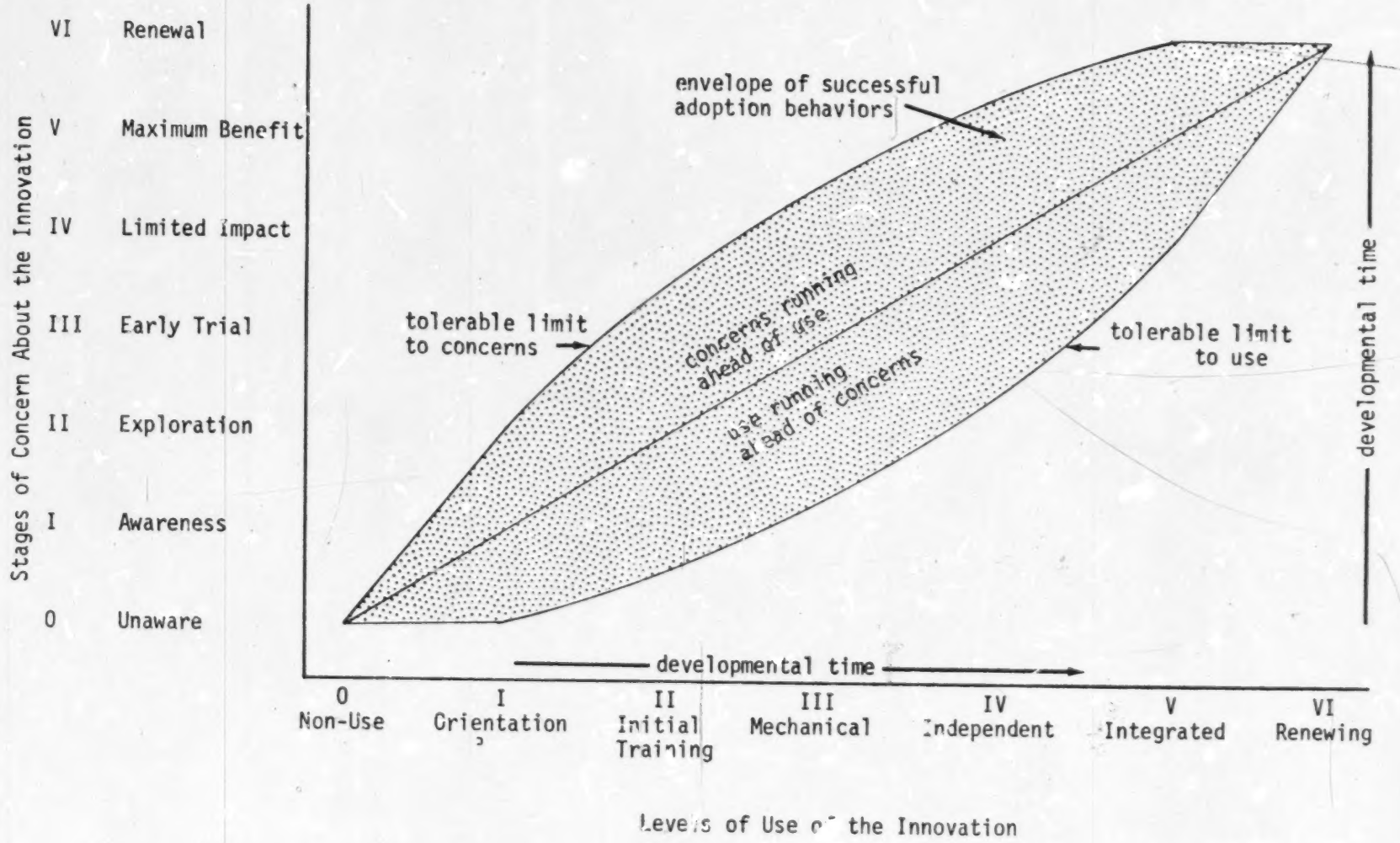

Figure 2. Relationship between stages of concern and levels of use with successful adoption

level-of-use dimension of the CBAM contains a set of operationally defined scale points that provides behavioral indicators of the quality of use of an innovation by each individual within the user system. Innovations are adopted by user systems composed of many individuals. It is important to have a record of each individual level of use. Also, a representation of the proportion of individuals within the user system that are using an innovation needs to be made. A descriptive statement that the average user in a school is at a mechanical level of use is not as useful as is a picture of the present level of use that each individual is demonstrating. An extensity profile can be constructed to acomplish this. All faculty, administrators and students can be observed and rated with respect to their levels of use of the innovation. When this information is plotted, the resultant graph represents the individual level of use and the extent of use of the innovation within the user system at the time the observations were made. By plotting extensity profiles at regular intervals, a visual record can be maintained of the extent and level of use of the innovation. When extensity profiles for different dates are compared, the rate of advancement of innovation use or its arrest can easily be seen. Figures 3 and 4 are examples of extensity profiles.

Putting It Together

The Concerns-Based Adoption Model in its entirety is represented in Figure 5. In operation, there is a collaborative linkage established between a user system that is adopting an innovation and a resource system that has expertise with the innovation and facilitating its adoption. In theory, linkage is accomplished via several communication channels that entail systematic probes of the user system and its personnel to assess each user's stage of concern and level of use about the innovation. Based on this assessment, adoption agents should be better able to select and employ personalized intervention strategies. The selected strategies are targeted toward advancing use of the innovation while, at the same time, resolving the user's concerns or arousing more advanced concerns. Interventions that are targeted in this way are most likely to appear as relevant to the user's concerns and, thereby, are most likely to effect advancement in the level of use of the innovation.

In summary, there are several important and distinguishing characteristics of the CBAM that make it different from previous "change" models, that make it practical, and that make it an interesting front for research. These characteristics include:

1. Focusing on adoption of innovations by educational institutions rather than "innovation-free" change.

2. Having the individual be the unit of analysis rather than groups or the entire user system.

3. Viewing innovation adoption as a developmental process with definable, predictable, and measurable levels and stages.

K represents the Knowledge scale of use and A represents the Action scale of use.

The unit of analysis is the individual instructor. Names are added to the right of each component as new potential users enter the user system.

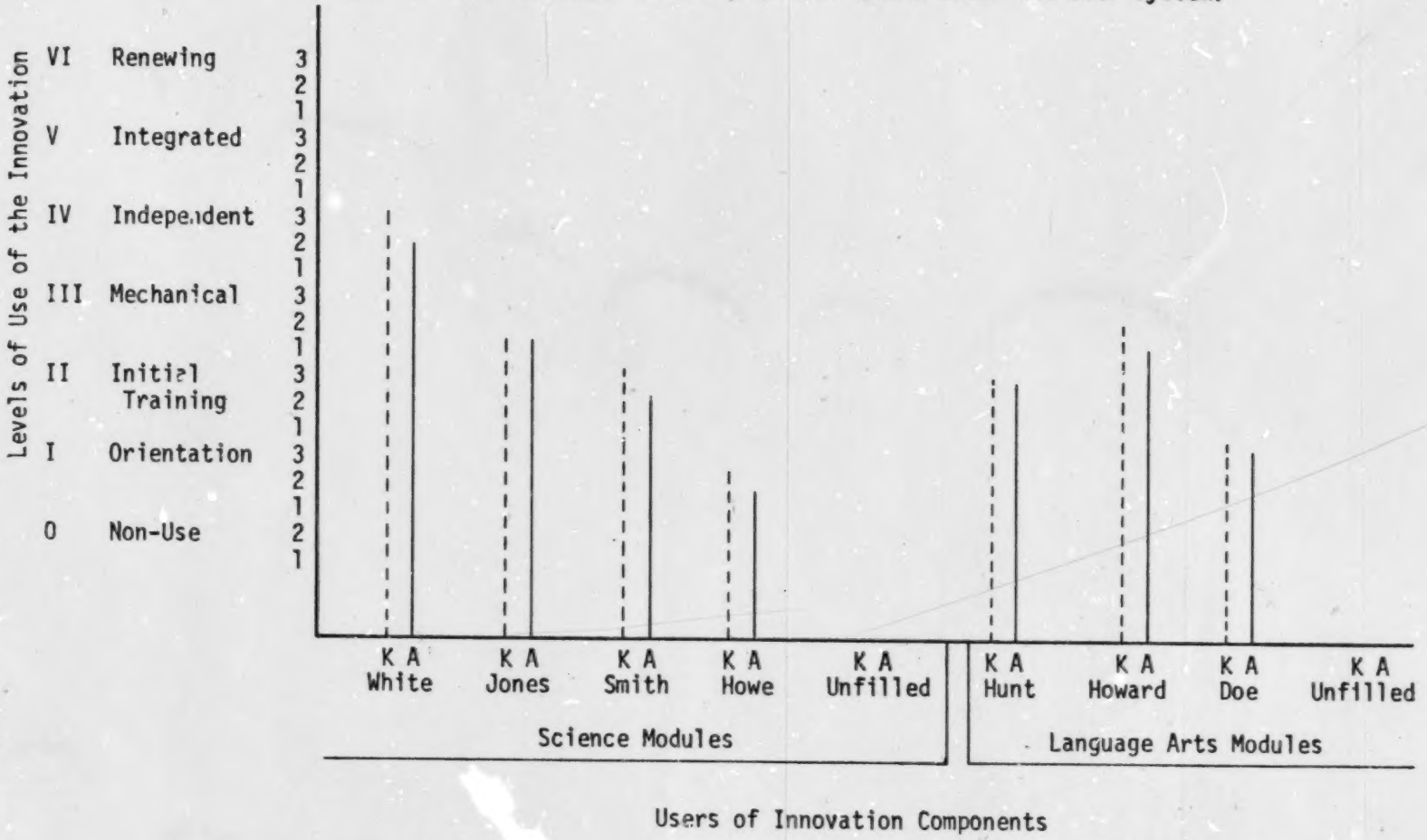

Figure 3. Extensity profile for university X after two years experience in using instructional modules

K represents the knowlege scale of use, and A represents the action scale of use.

The unit of analysis is the group. As new teams are constructed they are added on the right.

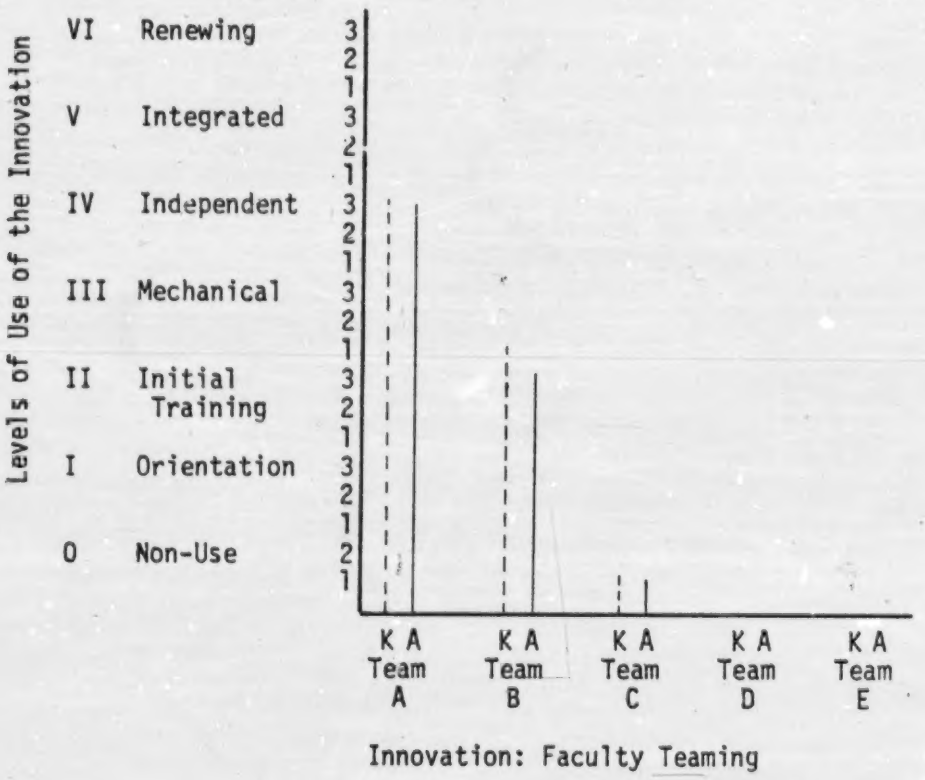

Figure 4. Extensity Profile for School Y After Two and One-Half Years of Establishing Faculty Teams

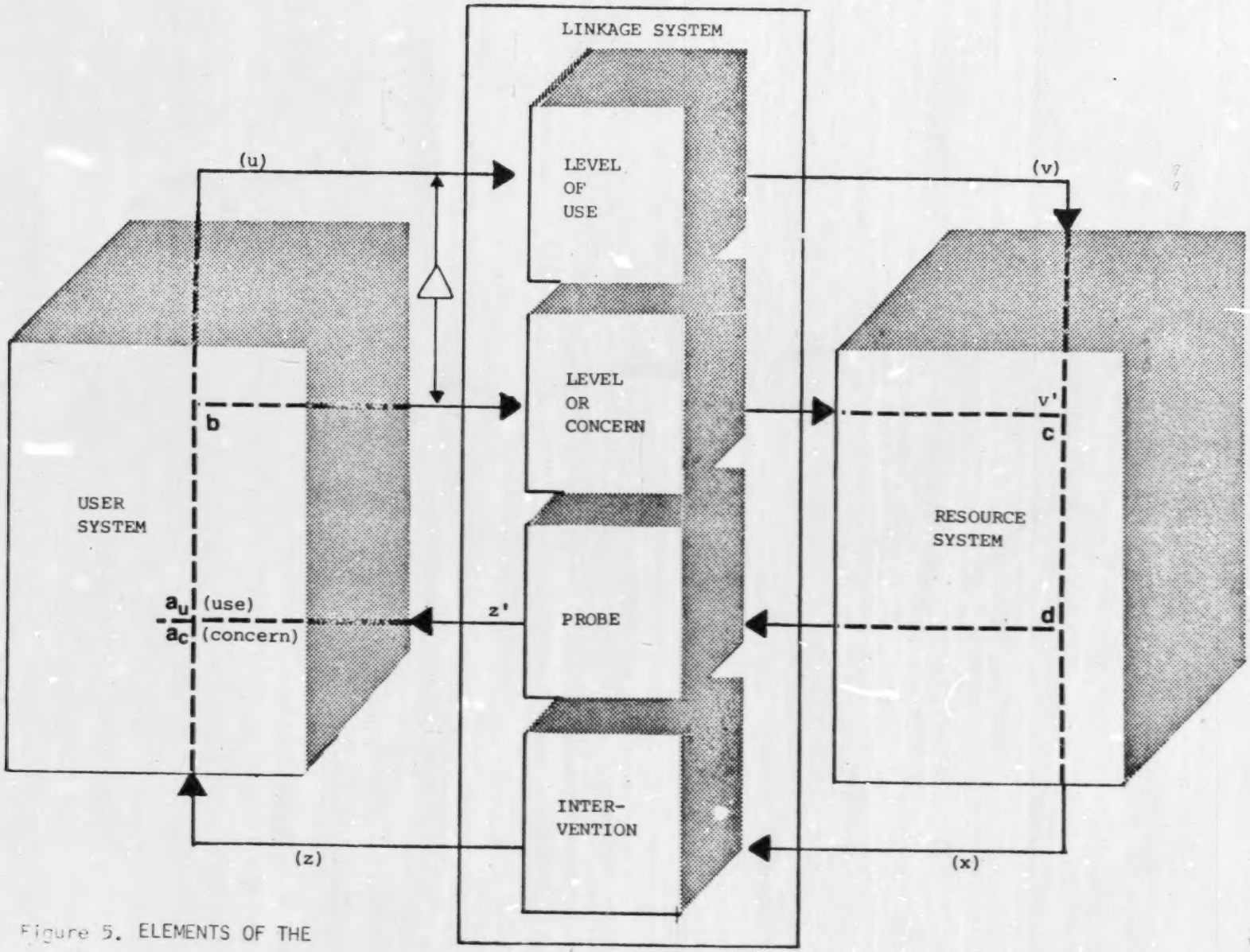

Figure 5. ELEMENTS OF THE CBAM

4. Hypothesizing that use of the innovation progresses through a series of definable, predictable, and measurable levels.

5. Hypothesizing that individual user concerns about the innovation progress through a series of definable, predictable, and measurable stages.

6. Hypothesizing that there is a corresponding relationship between a user's concern about the innovation and how the innovation is used.

The implications of empirically testing the dimensions, their related variables and the processes described in the CBAM are many. The implications touch on many areas including the study of change, product development, evaluation and the practice of adoption agents. Three major implications are the following:

1. If concerns about the innovation are demonstrated to be related to how the innovation is used, then adoption agents have a rational basis for selecting needed and personally relevant interventions.

2. If use of an innovation does progress developmentally through a series of definable levels, then the whole process of planning for and supporting innovation adoption needs to be better thought out and cover a longer period of time than is the common practice.

3. If there are different definable, predictable, and measurable levels of use of an innovation, then research on innovation treatment affects (summative evaluation) needs to take into account the quality of use of the innovation before interpreting effects of its use.

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Appendix A: Levels of Use of the Innovation

0 Non use: State in which the user does not know that the innovation exists.

Knowledge	Action
1. No knowledge of the innovation or any other similar innovation.	1. No action is being made either to individually develop or find out about efforts in the area.
2. Has general knowledge that there are efforts to develop innovations in the area.	2. Solicits general information from various sources about any efforts that are going on.

I Orientation: State in which the user is acquiring information about the innovation, its value orientation, its demands upon him, and the user system.

Knowledge	Action
1. Knows name and source of innovation.	1. Solicits descriptive information about the innovation.
2. Knows where to get sufficient information to formulate decision alternatives.	2. Solicits actual materials and analyzes them.
3. Has sufficient information about innovation and its implementation requirements to make a go/no-go decision.	3. Makes an informed decision to use the innovation or not to use it.

II Initial training: An action stage in which the user is being trained in the logistics and use of the innovation.

Knowledge	Action
1. Knows time requirements for training; knows general logistics and requirements for use of innovation.	1. Examines materials in terms of training mode and duration.
2. Knows components of innovation and its general characteristics	2. Studies actual materials for learners and instructors to acquire knowledge and skills.

3. Knows content of innovation for learners and general instructional and logistical requirements for professionals.	3. Prepares to initiate pilot project and engages in tryout of innovation.

III Mechanical: A stage of innovation implementation where users are engaged in pilot use of the innovation. The user is engaged in a step-wise attempt to master the tasks required by the innovation, often resulting in disjointed and superficial use.

Knowledge	Action
1. Knows only on a day-to-day basis what the innovation demands.	1. Implementation demonstrates lack of effective management and lack of anticipation of immediate/intermediate consequences.
2. Has sufficient knowledge to cope with the minimal daily requirements of the innovation.	2. Demonstrates control over day-to-day use of innovation but lacks ability to plan beyond that.
3. Knows detailed information about the innovation, its content, and its potential.	3. Handles well the mechanical aspects of the innovation, yet fails to attend to impact of the innovation on learners.

IV Independent: A state of innovation usage where the user handles the innovation well as an individual with quality impact on learners in his immediate sphere of influence, yet fails to integrate his work with the total system's effort.

Knowledge	Action
1. Knows the cognitive effects of the innovation on the learner and the relative effectiveness of alternate practices.	1. Explores and experiments with alternate combinations of innovations with existing practices.
2. Recognizes affective responses of learners as a result of his manipulation of methods with the innovation.	2. Examines impact of various combinations of existing methods and innovation elements on his students.

3. Knows cognitive and affective effects of innovation on his learners and how he can get the most out of the innovation for learners.	3. Maximizes learner involvement with innovation by adopting flexible elements of the innovation.

V Integrated: Stage in which the user is actively seeking ways to combine his efforts in using the innovation with colleagues to achieve a collective impact on all learners within an institution.

Knowledge	Action
1. Has minimal knowledge of how others are using the innovation.	1. Seeks out information from colleagues about what they are doing and develops tentative plans for coordination with them.
2. Has good understanding of what colleagues are doing.	2. Experiments with alternate patterns of use of the innovation based on collaboration with colleagues.
3. Knows how his use of the innovation and others' work can provide maximum impact for learners.	3. Implements most effective system for the innovation, which employs successful collaborative efforts and yields a high degree of impact on learners.

VI Renewing: The stage of use of an innovation in which the user re-evaluates the quality of use of the innovation, seeks new alternatives to achieve impact on learners, examines new developments in the field, and identifies new goals for himself and the institution.

Knowledge	Action
1. Has experiential knowledge of other innovations and their potential use in his situation.	1. Begins to experiment with sophisticated adaptations of the innovation in order to achieve more effective impact on learners.
2. Has knowledge of innovations in his own and related fields and their implications for improving the quality of learning within his institution.	2. Seeks out new alternatives to enhance or replace the innovation.

3. Has broad knowledge of emerging alternative goals and means for education and the culture and perceives the dynamic role of his work and his institution as a vital part of the social system.

3. Systematically evaluates effectiveness of innovation and reappraises goals while seeking more effective means and perhaps new goals in the pursuit of optimal learner impact.

Appendix B: Stages of Concern About the Innovation

0 Unaware: No indication of awareness that the innovation exists. There may be interest in similar innovations or a complete absence of awareness or interest in the area.

1. No indicators of interest in learning of new things in area that innovation is a part of.

2. Interest in learning of things in the area is expressed.

I Awareness: Indicates a general awareness of the innovation. The potential adopter is likely to inquire about obvious characteristics of the innovation and of himself in relation to it in various non-specific ways (e.g., expressions of general feeling toward innovation, limited evaluation, passive, passing interests in it) may even include expressions of concern about possible personal conflict or threats toward self and personal status quo.

1. No need expressed, passive, no further interest, no questions.

2. Expresses a need to learn more of a general nature about the innovation and getting a broad superficial overview. What does the innovation look like in general to me and my "program?"

3. Expresses need to learn more specific information. How do I learn more detail?

II Exploration: Indicates exploration of the roles played by the individual user and of the demands placed upon him; also includes exploration of role in relation to the reward structure of the organization and exploration of potential conflicts with existing structures or personal commitment that have financial or status implications.

1. Expresses fear, wory, doubt about the future role he must play if innovation is adopted. Worries relate to self, self in structure, and personal or professional rewards.

2. Expresses ambivalence toward the innovation, his role in relation to it, and its effect on the institution's social and professional structure.

3. Expresses questions of a constructive, problem-solving nature in relation to his role, place in the structure, and personal and professional future. Queries reflect a commitment toward the innovation and a drive toward movement.

III Early Trial: Indicates user's exploration of his performance and manipulation of materials and time.

1. Expresses lack of confidence in his ability to carry out his role with the innovation. Expresses discomfort about his ability to handle the organizational aspects of the innovation.

2. Expresses uncertainty about the use of the innovation and tends to interpret materials too literally; requires confirmation that his actions are proper.

3. Expresses general confidence in using the innovation but probes details of organization, sequencing, etc., to make operational use of the innovation more efficient.

IV Limited Impact: Indicates user's exploration of impact of innovation on clients in his immediate sphere of influence.

1. Expresses a need to insure that learners are receiving what they need to function effectively with the innovation; seeks confirmation that he is doing an effective job with the innovation.

2. Expresses desire to identify means by which the learners can gain more from the innovation the next time it is used; seeks to become more effective by eliciting feedback from learners.

3. Expresses need for learners to be able to relate their experiences with the innovation with broader goals of the course; recognizes a personal need to become more knowledgeable about the total operation within the program.

V Maximum Benefit: Indicates user's exploration of the total impact of the innovation in an institutional context on learners and users.

1. Expresses a desire to gain an understanding of what is going on within other parts of the institution in order to integrate more fully the learner's experiences with the innovation; expresses desire to seek effective working relationship with colleagues to further the goals of the innovation.

2. Expresses a desire to maximize the outcomes of the collective effort within the institution with respect to the innovation; expresses a desire to share his experience with others in order to increase the group's capacity to use the innovation.

3. Expresses a need to identify conditions that would tend to sustain the maximum level of output with respect to the innovation; expresses need to achieve full satisfaction for self and the group.

VI Renewal: Indicates user's exploration of new or better ways to reach the same goals or new goals.

1. Expresses desire to adapt the innovation in order to integrate the latest advances in the fields related to the innovation; expresses desire to acquire information and skill which will assist in maintaining current professional level.

2. Expresses need to explore and identify better means to achieve what is already effective output with respect to the innovation; expresses desire to incorporate new techniques into his professional repertoire.

3. Expresses need to keep himself and the institution open to new ideas, goals, and means of achieving maximum outcomes for learners and users; expresses desire for experiences that will broaden his outlook on his personal and professional life.